- 9 -

WHAT IS CLAIMED IS:

1.   A loudspeaker unit adapted to environment, comprising:

a microphone for picking up a sound regenerated from a loudspeaker;

processing means for comparing at real time an output signal from said microphone with an output signal from a sound source with reference to the characteristic at an optional frequency and the characteristic of the echo or the characteristic of the reverberation each including the delay time, respectively, and correcting a signal from said sound source with the difference output signal between the microphone and the sound source;

an amplifier for amplifying the output of said processing means; and

a loudspeaker.

2.   A loudspeaker unit adapted to the environment according to Claim 1 wherein said processing means for correcting the signal from said sound source comprising:

a first A/D converter for performing digital conversion of a sound signal outputted from the sound source;

a memory for storing the converted voice data of

samples taken within a fixed time determined as a

subject time for the delay of the reverberation and the

echo;

a second A/D converter for performing digital

conversion of the feedback signal outputted from said

microphone as the feedback data;

a successive comparison·analysis part for

successively comparing said feedback data with the

stored voice data, analyzing the intensity of the

reverberation and the echo and outputting the result as

a correction parameter;

a regenerative signal processing part for adding

data corrected by said correction parameter to the

stored voice data and processing the result as the

regenerative data; and

a D/A converter for converting said regenerative

data to an analog signal.

3.   A loudspeaker unit adapted to the environment

according to Claim 2 wherein said successive

comparison·analysis part performs processing by adding

antiphase feedback data to said voice data so that the

difference between said voice data obtained as the

serial data and said feedback data becomes a fixed

value or 0.

4.   A loudspeaker unit adapted to the environment according to Claim 1 wherein,

the comparison of the characteristic at said optional frequency and the comparison of the characteristic of the echo or the reverberation each including the delay time are learned by arithmetic and a signal to be sent to the loudspeaker is corrected according to the learned result.

5.   A loudspeaker unit adapted to the environment according to Claim 2 wherein,

the comparison of the characteristic at said optional frequency and the comparison of the characteristic of the echo or the reverberation each including the delay time are learned by arithmetic and a signal to be sent to the loudspeaker is corrected according to the learned result.

6.   A loudspeaker unit adapted to the environment according to Claim 1 wherein,

the comparison of the characteristic at said optional frequency and the comparison of the characteristic of the echo or the reverberation each including the delay time are intermittently performed and a signal to be sent to the loudspeaker is corrected according to the comparison result.

7.   A loudspeaker unit adapted to the environment according to Claim 2 wherein,

the comparison of the characteristic at said optional frequency and the comparison of the characteristic of the echo or the reverberation each including the delay time are intermittently performed and a signal to be sent to the loudspeaker is corrected according to the comparison result.

8.   A loudspeaker unit adapted to the environment according to Claim 4 wherein,

the comparison of the characteristic at said optional frequency and the comparison of the characteristic of the echo or the reverberation each including the delay time are intermittently performed and a signal to be sent to the loudspeaker is corrected according to the comparison result.

9.   A loudspeaker unit adapted to the environment according to Claim 5 wherein,

the comparison of the characteristic at said optional frequency and the comparison of the characteristic of the echo or the reverberation each including the delay time are intermittently performed and a signal to be sent to the loudspeaker is corrected

according to the comparison result.